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ABSTRACT

An extreme view of language acquisition sees base structures as innate, and acquisition of the grammar of a particular language as a process of learning the transformation rules needed to get from base structures to surface structures of adult native speakers. Base structures are understood to most resemble simple-active-affirmative-declarative sentences (SAADs) on the surface level. This has resulted in the treatment of SAADs as basic and normative, and other surface forms as derivative. This paper challenges this approach from a pragmatic standpoint, and attempts to explain units of linguistic expression as instruments to fulfill intentions. The propositional interpretation for linguisitc description is not considered to be a norm for acquisition. Work done by Tonkova-Yampol'skaya defines intonation as the beginning of speech development, the crux of that approach being the distinction between natural and intentional sounds. This natural/intentional distinction is drawn on the basis of relaxed as opposed to controlled articulation. The conclusion is that intentional articulation begins at the onset of the babbling stage and that request-demand and interrogation intonemes increasingly dominate infant speech in the second year. Suggestions as to how the transition occurs from initial speech patterns to SAAD forms are made, with specific reference to focus. (CLK)

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A PRAGMATIC APPROACH TO LANGUAGE ACQUISITION

In this paper I will expose no new facts about language acquisition. Rather, I will invite you to an interpretation of a number of facts widely known, but usually interpreted from a quite different perspective. I hope to show that my interpretation of these facts gives a more coherent accounting than the received interpretation, even though there may be a number of other facts about language acquisition that do not so neatly fit. I will also suggest how this interpretation opens the way to an adequate accounting for a number of other facts for which there is no current accounting. My hope is that this initial show of coherence and applicability will indicate that this line of interpretation is worthy of further pursuit.

The received interpretation, of course, is not that of imitation and reinforcement from classical learning theory, but that of "internalization of rules" from generative treatments in linguistics. The extreme view is that base structures are innate, and that acquiring the grammar of a particular language is acquiring the transformation rules necessary to get from the base structures to the surface structures of adult native speakers. (e.g., 8) Although the base structures are construed to include forms of an abstract nature, they are understood to be most similar to simple-active-affirmative-declarative sentences (SAAD) on the surface level. This has,

in turn, led to treating SADDs as basic and normative, from which other surface forms are understood as derivative. Thus understood as grammatically normative, they are also understood as acquisitionally antecedent to other surface forms. From this foundation, the acquisition of grammar in the first two years is most standardly interpreted.

This received interpretation has in recent years undergone some moderation and/or modification in the hands of both linguistics and psychologists. Still, McCawley's contentions about V-S-O (8), Ross' introduction of performative prefixes (11), Bever's shift from rules to strategies (1), have all left the primacy of SAADs pretty well in tact. This primacy is undergirded by understanding the logic of language in terms of propositions, and by the "intuition" that the primary purpose of linguistic communication is to "say something," i.e., to give expression to truth as well as to meaning. This intertwining of meaning with truth underlies Searle's treatment of the content-units of speech acts as propositional (and of propositions as reference plus predication) (12), and it is fundamental to the program of a "logic of grammar" being undertaken by Harman and Davidson (6). The propositional interpretation of verbal expression is in no way new, however, but the dominant one among both Philosophers and grammarians in western thought dating back at least to the days of Plato and Aristotle. SAADs merely give the most clear and straight forward expression to

propositions, the closest surface structure form to underlying propositional kernels.

My objective is to call into question this propositional prejudice in the understanding of early developments in language acquisition. I will take instead a pragmatic stance, seeking to understand units of linguistic expression to function as instruments to fulfill intentions. This will not rule out propositional functions, nor SAADs as their basic expression, but it will call into question their role as ontogentic paradigms. Indeed, I hope to show, whatever the value of a propositional interpretation for linguistic description, it is a misplaced assumption as a norm for language acquisition.

I.

Examinations of the intonation patterns of early breath segments have revealed exciting correlations to the patterns of adult speech. From measurements of sound intensity (I) and fundamental tone frequency (F_o) of 140 children in the age span of neonates to two years, Tonkova-Yampol'skaya drew the following conclusions: 1. That speech development begins with development of intonations; 2. That in the neonate's cry, F_o and I are not differentiated (indicating only sub-cortical control), and thus the cry is devoid of linguistic meaning, but that the F_o and I become differentiated, and the intonation pattern becomes fixed for expression of discomfort through childhood into adulthood; 3. That the child acquires new

intonational patterns on the basis of those employed by adults, indicating the presence of verbal-auditory feedbacks; 4. That intonations of placid cooing appear in the second month, those of happiness on the third (differentiated into exclamation and contentment in the sixth), intonations of request in the seventh month, and those of interrogation about the beginning of the second year; 5. That while these patterns are not identical to adult intonemes, they are strikingly similar; 6. That cortical control is evidenced (based on the law of integrative proportions) in the differentiation of F_o and I, and that the establishment of conductive pathways between verbal-auditory and vocal-motor cortical analysers and speech organs is evidenced in the interaction with adult intonations (14).

In her review, Menyuk gives a somewhat different account of Tonkova-Yampol'skaya's results: "'Narration' and 'assertion' utterances which rise gradually and then fall in fundamental frequency appear during the second month. 'Commands' which have fundamental frequency contours which rise sharply, then fall, appear in the tenth month and 'questions' which rise sharply at the end of the utterance appear at the beginning of the second year." (p. 59) This is not quite the travesty of distortion it at first appears. Menyuk's account finds structural basis in the experimental data, where the sililarity between cooing intonations and adult assertion intonations is noted. What Menyuk seems to latch on to in the

data are the forms traditionally taken as basic in adult grammar: declaration, command and interrogation. This fits neatly with the propositional interpretation of declaration as basic, and other forms as derivative. On such interpretation, she is able to conclude her review: "These data substantiate a theory of increasing markedness on the breath group to differentiate meaning." (ibid.) They of course substantiate no such thing. Both the patterning within the F_o and within the I and the differential between them is greater for the contented cooing of 7-10 months than for the insistent request of 10-12 months. It can only be read as "increasing markedness" on the presumption of a derivational heirarchy from a SAAD base.

Where Menyuk's conclusions are dependent upon structural presumptions, Tonkova-Yampol'skaya's are based upon functional observations. She characterizes the cooing at 2-5 months, which bears resemblance to adult assertion, as "indifferent intonation." It is functionally indifferent on two counts. First, it is what Lieberman characterizes as an unmarked breath group, as "what comes naturally" as the infant runs out of breath (7). The differentiation between F_o and I is only slight and the contour variation is almost non-existent, the F_o remaining nearly constant and the I falling off slightly at the end. This indicates minimal-if any-exercise of control. Second, it serves no communicative function, and may not even serve an expressive function until the differentiation of exclamation and contentment in the sixth month.

The crux of a functional account, of course, is to discern a basis for distinguishing between "what comes naturally" and "what comes intentionally." Tonkova-Yampol'skaya's contention that cortical control is evidenced in the differentiation of F_o and I seems a good place to start for such differentiation of the intentional from the natural. At this point the cry becomes functional and this signal of discomfort becomes a rudimentary form of communication. As a signal, however, it remains nothing more than a response to discomfort, though perhaps conditioned by anticipation of relief. More clearly intentional and communicative are the intonational patterns evidenced after six months, since they seem to rely on aural-oral feedback and adult-child interaction. Another index of the natural/intentional distinction is the differentiation between relaxed and controlled articulation. Taking the indifferent intonation of the 2-7 month period as relaxed articulation, we can say that the transition from the cooing to the babbling stage is roughly the time of the beginnings of intentional articulation.

This use of the relaxed/controlled differentiation as a basis for the natural/intentional distinction seems appropriate for the interpretation of early super-segmentation, since it is already widely (if tacitly) employed in interpreting segmentation. Usually, initial segmentation is noted as beginning with bilabial stops (/p/, /b/,/m/) and low back vowels (/a/). These are not, however, the initial phonations. Those

come earlier as velar fricatives (/x/) or back and central glides (/w/, /h/) together with high front vocoids (/i/). These initial phonations, because they are relaxed, are taken as natural (i.e., unintentional), and thus antecedent to segmental development. By a parity of reasoning, it is equally appropriate to treat relaxed intonation, like relaxed phonation, as a preintentional phenomenon.

This index controverts in part Tonkova-Yampol'skaya's own interpretation of her data. She seems to construe the cooing stage as involving at least rudimentary control and as deriving at least in part from adult reinforcement and infant imitation. These expressive modes of articulation (discontent, content, happiness) are in important senses neither intentional nor communicative. They are not instruments to achieve an end, since the expression is an end in itself, and they do not rely upon a listener (not even the speaker-as-listener) for their completion. The development of conventional expressions ("ouch," "ah," "whee") and artificial employment of such expressiveness does not mitigate this "natural" basis for their function even in adult life.

By the same token, this index also controverts in part Tonkova-Yampol'skaya's conclusions. If we so delimit intentional intonation to begin with the babbling stage, then the intoneme does not significantly precede the phoneme. The controlled employment of both arises at approximately the same time and lays a basis for linguistic communication to begin on

an interactive basis. It very likely coincides not only with development of conductive pathways in the cortex, but also with correlate developments in motor and sensory skills. (The coincidence of the appearance of "command" intonemes with that of holophrastic speech at about 10 months may suggest another functional plateau.)

The interaction of verbal communication in adult-child speech shows that the SAAD paradigm has virtually no functional place. The adult, in speaking to the child, pursues encouragement (cp. request intoneme from 7 months) restraint (cp. command intoneme from 10 months) and as the child becomes morphemically capable, inquiry (cp. question intoneme from 12 months). In 22 samples of an adult speaking to a two year old child, eight were in the form of request-command, twelve were in the form of question, and only one (as a response) was in the form of declaration (the remaining one appears as a combination of command and question). The same adult, in speaking to another adult, was not only less precise, more complicated and often ungrammatical in her syntax, but employed declaration almost exclusively (reported in 13). In samples of four mothers' speech to two-three year old children, 25-50% of the utterances were questions, while in informal family adult speech, the range is 1-25% (reported in 13).

For child-adult speech, not only are these samples of request, demand and inquiry accessible for imitation, but they are functionally appropriate for the child's own communication

needs. The child has needs and desires to fulfill and puzzlements to solve. Even when he has experiences to share or information to report, he must often do so in the form of demand for attention. SAADs have no basic pragmetic role in his early discourse.

II.

So far, I have drawn a natural/intentional distinction on the basis of a relaxed/controlled distinction in articulation. This leads to the conclusion that intentional intonation begins (with perhaps the exception of some expressive functions) about at the outset of the babbling period, and that request-demand and interrogation intonemes increasingly dominate the infant's speech into the second year. This conclusion is corroberated both by the adult-child speech available for models and by the plausibility of intentional speech functions for the child at this stage of his development. While this seems to overturn the propositional prejudice which takes the SAAD paradigm as basic, it leaves unaccounted for how the child functionally develops from these speech pattersn to the SAAD forms that characterize assertive functions. At this point I can only make what I hope will be plausible suggestions of what is functionally involved in the transition from holophrastic speech to more adult-like grammatical forms.

Following the period of single-word utterances, Braine has noted a pivot-open period (1), and following this period,

Gruber has characterized a topic-comment period (5). Menyuk, beginning from the propositional prejudice, interprets single word utterances as "assertions" and topicalization as basic: S (Modifier) Topic (10, p. 101). This invites us to begin with a topic as a proto-subject which refers to something, and to which is added (occasionally) a comment as a proto-predicate which says something about the topic. Gruber's own work shows why this cannot be the case. In a separate paper, he delineates the distinction of "performatives" from "reportives" in early speech, notes the respective similarity to predicate and subject-predicate constructions, and shows from the data that performatives ontogentically precede reportives (reported in 10, p. 102). He argues in his paper on topicalization that at the stage investigated (790 to 881 days old), on morphological, intonational and syntactical grounds, the topic of the sentence cannot be the subject, but is a grammatical unit distinct from the sentence which is its comment. Sentences are "subjectless sentences" which may contain NPs as objects, or appear in co-occurence with NPs as topics, but never appear with NPs as subjects. Even when appearing as topics, NPs (by analogy with the marked status of pronouns in the same role) are more like objects than subjects of the sentence. So, not only is a proto-type for SAADs absent in early performative-type utterances, but it is absent in the later reportive-type as well.

Returning to imperative and interrogative functions of speech, we can get some idea of why topicalization begins with

the proto-object of a sentence. It is the object of the action that is the intentional focus of both commands and questions. This is explicit in adult speech in which the subject is not expressed, and often in what are taken as elliptical yes-no questions (e.g., "Like it?" instead of "Do you like it?"). What is evident in such adult speech is that the communicative context makes the subject redundant. Since adult-child speech is usually very immediate in focus of attention, and situationally dependent as a result (or perhaps condition?), the subject has no functional place. The object which is the focus of inquiry or command is also usually situationally available, and its topicalization can be functionally understood on grounds of attentional emphasis or of sortal indication. From a pragmatic approach, the question is not one of introducing rules for deleting the subject, but one of introducing the subject as a functional unit of communication.

I suspect a key to understanding such development lies in the linguistic notion of focus as developed by Halladay. Not only is there a too ready assimilation of topic to subject in much of the literature (suggested even in Gruder's arguments against such assimilation), but also a too ready assimilation of focus to topic. This is obviated when we recognize that in adult English SAADs, the topic ordinarily comes first in the form of the subject, and the focus comes last in ordinary intonation patterns. The case is different, of course, for imperatives and interrogatives, raising two important

questions about developments in the third year: 1) What is the relation of intentional focus to grammatical focus (i.e., how well do patterns of intention and attention match up with intonational patterns)? 2) What is the initial relation between focus and topicalization as suggested by word order and grammatical structure correlated with intonemes? An answer to this latter question might well give an account of why so many of the orderings of morphemes in the pivot/open and topic/comment stages are the reverse of the orderings in adult speech.

III.

Gruber's own account of the development of subject topicalization into the sentence, out of the rules that account not only for pivot/open forms but also for topic/comment forms at the earlier stages seems to me to be quite adequate as a linguistic description. From a pragmatic approach, we cannot treat it as an explanation of how the child develops these forms, however. We must rather seek to understand how the child's communicative needs make such an integration of topic and comment into a single sentence (together with the shift of the topic from object to subject) an expedient tool of his discourse. The answer already has been suggested. Where the situation provides the subject of discourse in the concrete, the subject expression is pragmatically redundant. Where the topic of discourse is absent, the introduction of the subject into grammar becomes a necessity. The subject in grammar provides the child with a linguistic abstraction comparable to his earlier abstraction

of attended or intended objects not immediately available perceptually. This new linguistic power may recapitulate in interesting ways abstraction in the development of perceptual skills, though this would require extensive linguistic and psychological investigation to substantiate.

Once the SAAD form has been developed as a form in the child's speech, several considerations suggest why it becomes quickly paradigmatic for subsequent grammatical development. One is the abstractive power already noted. Another is the facility it provides both for imitation of and interaction with adult speech. Still another is the tendency usually called "generalization" (an unhappy misnomer). Just as the child begins with strong verb forms, but comes to take weak verb forms as paradigmatic, so he may begin with imperative and interrogative patterns and subsequently take SAADs as paradigmatic. Again, this requires further investigation from a pragmatic approach, once freed from a propositional prejudice.

With issues of situational abstraction go those of morphological redundancy. These redundancies may be closely tied to the requirements for abstraction in some cases, but they are also relevant to the development of effective child-adult communication. From the standpoint of the adult, the early speech of the child at this stage (i.e., three to five years) appears often as hopelessly ambiguous (even when it is intentionally obvious to the child). The basic strategy in language for disambiguation is the introduction of redundancies, and

the child finds this an effective tool, often on the basis of suggestions supplied for him by the corresponding adult. Such an approach would not involve syntactical transformation, but morphological redundancy. What is called for then, from a pragmatic approach, is an account of how such redundancy generates an ordering of difficulty in production and recognition, and of how it might give a different account (indeed, a different ordering) from that which treats the ordering as based upon number and complexity of generative transformations. This would require a reintroduction of a morphological approach to syntax for acquisition purposes even if generative approaches were taken as adequate for the purposes of linguistic description.

A pragmatic approach might lead us to a case grammar interpretation (cf. 4) of syntax acquisition from neither a standard theory nor a generative semantic base (already suggested by Brown on different grounds -- cf. 3), but rather from a functional one. Already having some suggestion in imperative and interrogative beginnings of a base in the verb, we can understand the development of "base-structure" cases as the assimilation to language of all of the practically relevant relations to action in the human organism's interaction with his environment. This would treat syntax neither as associational stringing nor as built-in structures, but as linguistic abstractions of the functional realities of human action. We could then see syntagmatic associations as syntactical strategies for developing this syntactical base and the subsequent shift to paradigmatic associations as a further development of

categoreal strategies for which the contextual restrictions of case gives a structural base.

The superficial treatment of these latter matters is dictated not only by the limits of presentation time, but also by the paucity of experimental data. My objective here has been merely to open the way to experimentation on these matters from a pragmatic perspective. Approached from a functional base, the shift from rule to strategy makes obvious sense, and V-S-O orderings, performative prefixes and case analyses take on new meanings. Left behind is the behaviorism/nativism controversy, since that problem setting no longer makes sense in the light of a pragmatic interpretation. This may require us to focus afresh on the natural/intentional distinction as a conceptual problem for psychology, but it is one of a quite different nature, and not peculiar to language acquisition. As a fundamental issue in understanding human action as such, it is a fundamental problem in a variety of psychological contexts.

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References

1. Thomas G. Bever, "The Influence of Speech Performance on Linguistic Structures," in Flores d'Arcais and Levelt (eds.), Advances in Psycholinguistics (Amsterdam, 1970).

2. M.D.S. Braine,"The Ontogeny of English Phrase Structure: The First Phase," Language, 1963.

3. Roger Brown, A First Language: The Early Stage (Cambridge, Mass., 1973).

4. Charles Fillmore, "The Case for Case," in Bach and Harms (eds.) Universals in Linguistic Theory (N.Y., 1968).

5. J.S. Gruber, "Topicalization in Child Language," Foundations of Language, 1967.

6. Gilbert Harman and Donald Davidson, The Logic of Grammar (Belmont, Ca., 1974).

7. Phillip Lieberman, Intonation, Perception and Language (Cambridge, Mass., 1967).

8. James D. McCawley, "English as a V-S-O Language."

9. David McNeill, The Acquisition of Language (N.Y., 1970).

10. Paula Menyuk, The Acquisition and Development of Language (Englewood Cliffs, 1971).

11. J.R. Ross, "On Declarative Sentences," in Jacobs and Rosenbaum (eds.), Readings in Transformational Grammar.

12. John Searle, Speech Acts (London, 1969).

13. Dan Slobin, Psycholinguistics (Glenview, 1971).

14. R.V. Tonkova-Yampol'skaya, "Development of speech intonation in infants during the first two years of life," Soviet Psychology, 1969.